VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims

1. (Once Amended) An array comprising at least one pattern of probe oligonucleotide spots stably associated with the surface of a solid support, wherein each probe oligonucleotide spot of said pattern ~~corresponds to a target nucleic acid and~~ comprises an oligonucleotide probe composition made up of long oligonucleotide probes that range in length from about 50 to 120 ~~nt~~ nucleotides.

3. (Once Amended) The array according to Claim 2, wherein each probe oligonucleotide spot in said pattern ~~corresponds~~ hybridizes to a different target nucleic acid.

Cancel Claim 4.

Cancel Claim 5.

Cancel Claim 6.

10. (Once Amended) The array according to Claim 1, wherein the ~~density of~~ spots on said array ~~does~~ do not exceed a density of about 1000/cm^2.

11. (Once Amended) The array according to Claim 10, wherein the ~~density of~~ spots on said array ~~does~~ do not exceed a density of about 400/cm^2.

12. (Once Amended) The array according to Claim 1, wherein the ~~number of~~ spots on said array ~~ranges~~ range from about 50 to 50,000 in number.

13. (Once Amended) The array according to Claim 1, wherein the ~~number of~~ spots on said array ~~ranges~~ range from about 50 to 10,000 in number.

14. (Once Amended) An array comprising a pattern of probe oligonucleotide spots covalently bound to the surface of a solid support, wherein each probe oligonucleotide spot ~~corresponds to a target nucleic acid and~~ comprises a long oligonucleotide probe composition made up of long oligonucleotides of from about 60 to 100 ~~nt~~ nucleotides in length~~, wherein each of said long oligonucleotide probes exhibits substantially the same high hybridization efficiency with its respective target and low level of non-specific hybridization~~.

16. (Once Amended) The array according to Claim 15, wherein each probe oligonucleotide spot in said pattern ~~corresponds~~ hybridizes to a different target nucleic acid.

17. (Once Amended) The array according to Claim 15, wherein two or more probe oligonucleotide spots in said pattern ~~correspond~~ hybridize to the same target nucleic acid.

18. (Once Amended) The array according to Claim 14, wherein ~~the length of~~ each of said unique oligonucleotides ranges from about 65 to 90 nucleotides in length.

19. (Once Amended) The array according to Claim 14, wherein the ~~density of~~ spots on said array ~~does~~ do not exceed a density of about $1000/cm^2$.

20. (Once Amended) The array according to Claim 14, wherein the ~~density of~~ spots on said array ~~does~~ do not exceed a density of about $400/cm^2$.

21. (Once Amended) The array according to Claim 14, wherein the ~~number of~~ spots on said array ~~ranges~~ range from about 50 to 50,000 in number.

22. (Once Amended) The array according to Claim 14, wherein the ~~number of~~ spots on said array ~~ranges~~ range from about 50 to 10,000 in number.

23. (Once Amended) An array comprising a pattern of probe oligonucleotide spots of a density that does not exceed about 400 spots/cm^2 covalently attached to the surface of a glass support, wherein each probe oligonucleotide spot ~~corresponds to a different target nucleic acid and~~ comprises an oligonucleotide probe composition made up of long oligonucleotides of from about 65 to 90 ~~nt~~ nucleotides in length~~, wherein each of said long oligonucleotides has substantially the same high hybridization efficiency for its corresponding target and the substantially the same low level of non-specific hybridization~~.

Please add the following new claims:

--36. The array according to Claim 1, wherein any variance in hybridization efficiency among any to probes of said array does not exceed about 10-fold.

37. The array according to Claim 14, wherein any variance in hybridization efficiency among any to probes of said array does not exceed about 10-fold.

38. The array according to Claim 23, wherein any variance in hybridization efficiency among any to probes of said array does not exceed about 10-fold. --

IN THE SPECIFICATION

Please replace the paragraph beginning on page 41, line 1, with the following rewritten paragraph:

TABLE 1

Array Position	Probe Name	Probe Sequence
A1	s64_2	AC CTAGAAAGCT ATTTGAGCTG GATCCGTCCC TCTGATCGTG ACGCCTTCCT TGAAGAATTT CGGACATCTC TGCCAAAGTC TTGTGACCTG TAGCTGCCA (SEQ ID NO:3)
A2	s64_2_90	AGAAAGCTATTTGAGCTGGATCCGTCCCTCTGATCGTGACGCCTTCCTTGAAGAATTTCGGACATCTCTGCCAAAGTCTTGTGACCTGTA (SEQ ID NO:4)
A3	s64 2 80	AGCTATTTGAGCTGGATCCGTCCCTCTGATCGTGACGCCTTCCTTGAAGAATTTCGGACATCTCTGCCAAAGTCTTGTGA (SEQ ID NO:5)
A4	s64 2 70	ATTTGAGCTGGATCCGTCCCTCTGATCGTGACGCCTTCCTTGAAGAATTTCGGACATCTCTGCCAAAGTA (SEQ ID NO:6)
B1	s64 2 60	AGCTGGATCCGTCCCTCTGATCGTGACGCCTTCCTTGAAGAATTTCGGACATCTCTGCCA (SEQ ID NO:7)
B2	s64 2 50	AATCCGTCCCTCTGATCGTGACGCCTTCCTTGAAGAATTTCGGACATCTA (SEQ ID NO:8)
C1	s26 2	AAACCCAGGA AAATACCAAA TCCAGATTTC TTTGAAGATC TGGAACCTTT CAGAATGACT CCTTTTAGTG CTATTGGTTT GGAGCTGTGG TCCATGACCTA (SEQ ID NO:9)
C2	s26_2_90	AGGAAAATACCAAATCCAGATTTCTTTGAAGATCTGGAACCTTTCAGAATGACTCCTTTTAGTGCTATTGGTTTGGAGCTGTGGTCCATA (SEQ ID NO:10)
C3	s26 2 80	AATACCAAATCCAGATTTCTTTGAAGATCTGGAACCTTTCAGAATGACTCCTTTTAGTGCTATTGGTTTGGAGCTGTGGA (SEQ ID NO:11)
C4	s26 2 70	AAAATCCAGATTTCTTTGAAGATCTGGAACCTTTCAGAATGACTCCTTTTAGTGCTATTGGTTTGGAGCA (SEQ ID NO:12)
D1	s26 2 60	ACAGATTTCTTTGAAGATCTGGAACCTTTCAGAATGACTCCTTTTAGTGCTATTGGTTTA (SEQ ID NO:13)
D2	s26 2 50	ATTCTTTGAAGATCTGGAACCTTTCAGAATGACTCCTTTTAGTGCTATTA (SEQ ID NO:14)
A5 and E5	c370 2	AGGGTC AGCTGATCTA CGAGTCTGCC ATCACCTGTG AGTACCTGGA TGAAGCATAC CCAGGGAAGA AGCTGTTGCC GGATGACCCC TATGAGAAAG CTTGCA (SEQ ID NO:15)
A6 and E6	c370_2_90	AAGCTGATCTACGAGTCTGCCATCACCTGTGAGTACCTGGATGAAGCATACCCAGGGAAGAAGCTGTTGCCGGATGACCCCTATGAGAAA (SEQ ID NO:16)
A7 and E7	c370 2 80	AATCTACGAGTCTGCCATCACCTGTGAGTACCTGGATGAAGCATACCCAGGGAAGAAGCTGTTGCCGGATGACCCCTATA (SEQ ID NO:17)
A8 and E8	c370 2 70	ACGAGTCTGCCATCACCTGTGAGTACCTGGATGAAGCATACCCAGGGAAGAAGCTGTTGCCGGATGACCA (SEQ ID NO:18)
B5 and F5	c370 2 60	ACTGCCATCACCTGTGAGTACCTGGATGAAGCATACCCAGGGAAGAAGCTGTTGCCGGAA (SEQ ID NO:19)
B6 and F6	c370 2 50	AATCACCTGTGAGTACCTGGATGAAGCATACCCAGGGAAGAAGCTGTTGA (SEQ ID NO:20)

G1	s91 3	AGGCCCCAAAT GGCTGGAAAT CTCGCCTATT TAGGCATTCT ACTCAGAAAA ACCTTAAAAA TTCACAAATG TGTCAGAAGA GCCTTGATGT GGAAACCGATA (SEQ ID NO:21)
G2	s91_3_90	ACAAATGGCTGGAAATCTCGCCTATTTAGGCATTCTACTCAGAAAAACCTTAAAAATTCACAAATGTGTCAGAAGAGCCTTGATGTGGAA (SEQ ID NO:22)
G3	s91 3 80	AGGCTGGAAATCTCGCCTATTTAGGCATTCTACTCAGAAAAACCTTAAAAATTCACAAATGTGTCAGAAGAGCCTTGATA (SEQ ID NO:23)
G4	s91 3 70	AGAAATCTCGCCTATTTAGGCATTCTACTCAGAAAAACCTTAAAAATTCACAAATGTGTCAGAAGAGCCA (SEQ ID NO:24)

Please replace the paragraph beginning on page 42, line 1, with the following rewritten paragraph:

H1	s91 3 60	ACTCGCCTATTTAGGCATTCTACTCAGAAAAACCTTAAAAATTCACAAATGTGTCAGAAA (SEQ ID NO:25)
H2	s91 3 50	ACTATTTAGGCATTCTACTCAGAAAAACCTTAAAAATTCACAAATGTGTA (SEQ ID NO:26)
E1	s97 4	ATAGGAGGGG TGAAGCCCAG CTGCTCATGA ACGAGTTTGA GTCAGCCAAG GGTGACTTTG AGAAAGTGCT GGAAGTAAAC CCCCAGAATA AGGCTGCAAGA (SEQ IDNO:27)
E2	s97_4_90	AGGGGTGAAGCCCAGCTGCTCATGAACGAGTTTGAGTCAGCCAAGGGTGACTTTGAGAAAGTGCTGGAAGTAAACCCCCAGAATAAGGCA (SEQ ID NO:28)
E3	s97 4 80	AGAAGCCCAGCTGCTCATGAACGAGTTTGAGTCAGCCAAGGGTGACTTTGAGAAAGTGCTGGAAGTAAACCCCCAGAATA (SEQ ID NO:29)
E4	s97 4 70	ACCAGCTGCTCATGAACGAGTTTGAGTCAGCCAAGGGTGACTTTGAGAAAGTGCTGGAAGTAAACCCCCA (SEQ ID NO:30)
F1	s97 4 60	ATGCTCATGAACGAGTTTGAGTCAGCCAAGGGTGACTTTGAGAAAGTGCTGGAAGTAAAA (SEQ ID NO:31)
F2	s97 4 50	AATGAACGAGTTTGAGTCAGCCAAGGGTGACTTTGAGAAAGTGCTGGAAA (SEQ ID NO:32)
C5	s74 3	ATATGT AACTGAAGAA GGTGACAGTC CTTTGGGTGA CCATGTGGGT TCTCTGTCAG AGAAATTAGC AGCAGTCGTC AATAACCTAA ATACTGGGCA AGTGTA (SEQ ID NO:33)
C6	s74_3_90	AAACTGAAGAAGGTGACAGTCCTTTGGGTGACCATGTGGGTTCTCTGTCAGAGAAATTAGCAGCAGTCGTCAATAACCTAAATACTGGGA (SEQ IDNO:34)
C7	s74 3 80	AAAGAAGGTGACAGTCCTTTGGGTGACCATGTGGGTTCTCTGTCAGAGAAATTAGCAGCAGTCGTCAATAACCTAAATAA (SEQ ID NO:35)
C8	s74 3 70	AAGTGACAGTCCTTTGGGTGACCATGTGGGTTCTCTGTCAGAGAAATTAGCAGCAGTCGTCAATAACCTA (SEQ ID NO:36)
D5	s74 3 60	ACAGTCCTTTGGGTGACCATGTGGGTTCTCTGTCAGAGAAATTAGCAGCAGTCGTCAATA (SEQ ID NO:37)
D6	s74 3 50	ACTTTGGGTGACCATGTGGGTTCTCTGTCAGAGAAATTAGCAGCAGTCGA *(SEQ IDNO:38)*

TABLE 1 (CONT)